Serial No. 09/886,814

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

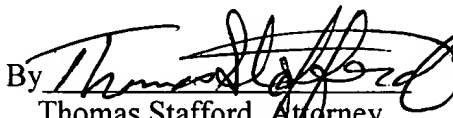|	
Inventor(s)	Randy L. Hackbarth
	James David Herbsleb
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Case	3-4-13
Serial No.	09/886,814 Group Art Unit 2152
Filing Date	June 21, 2001
Examiner	Not Assigned
Title	Apparatus and Method for use in a Data/Conference Call System to Provide Collaboration Services

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231
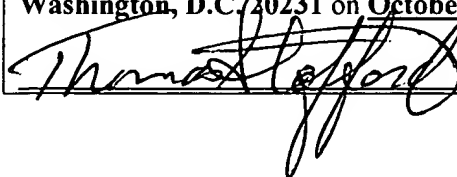
Attention: Office Draftsperson

FORMAL DRAWING

This is to supply a set of Formal Drawing in the above-identified application. Accordingly, a new set of 15 (15) sheets of Formal Drawing on Formal Board is being supplied herewith.

Respectfully,
Randy L. Hackbarth
James David Herbsleb
Graham John Wills

By _____
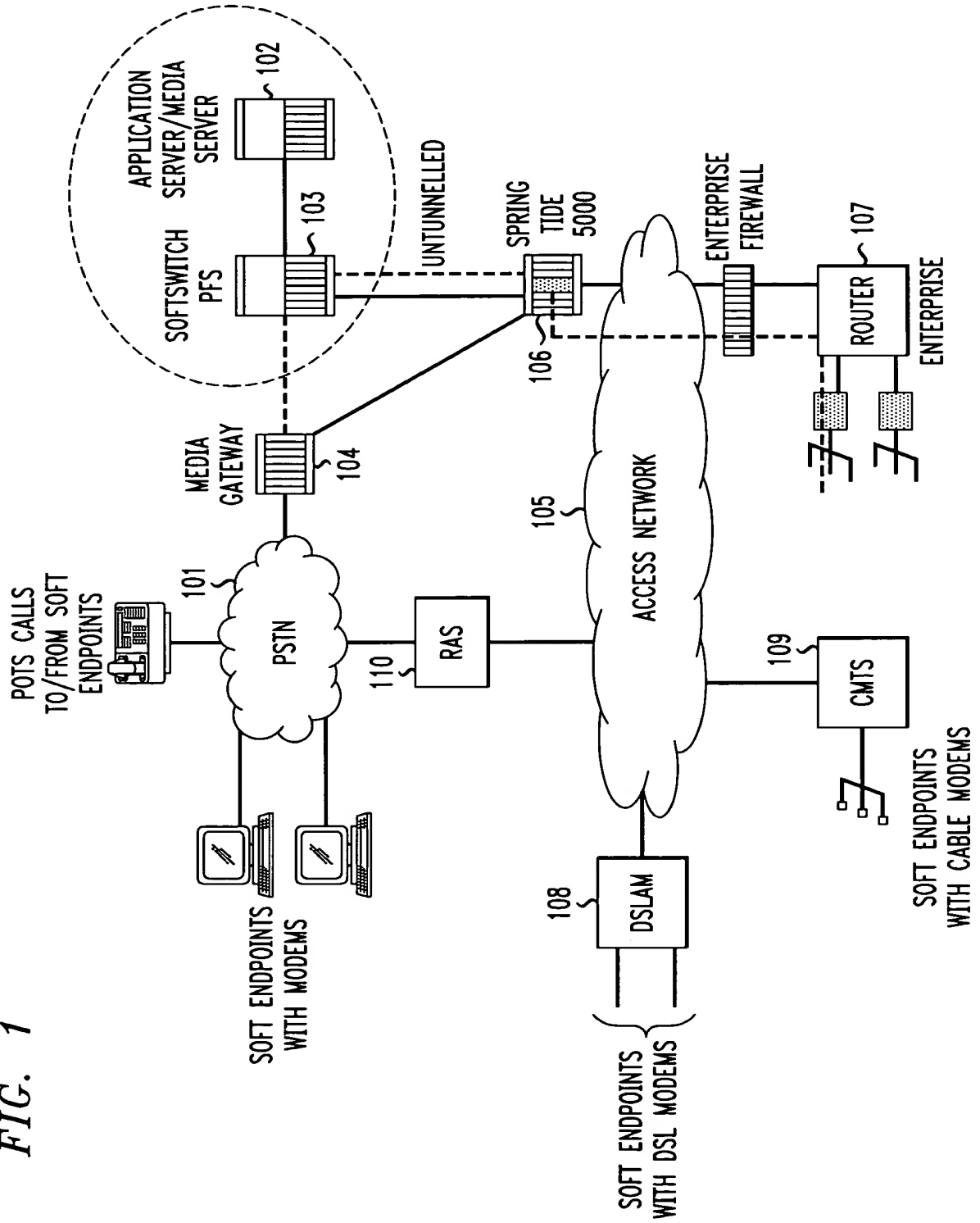Thomas Stafford, Attorney
Registration No. 24767

Dated: _10/04/01_

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: **Assistant Commissioner for Patents, Washington, D.C. 20231** on October 4, 2001 by **Thomas Stafford**
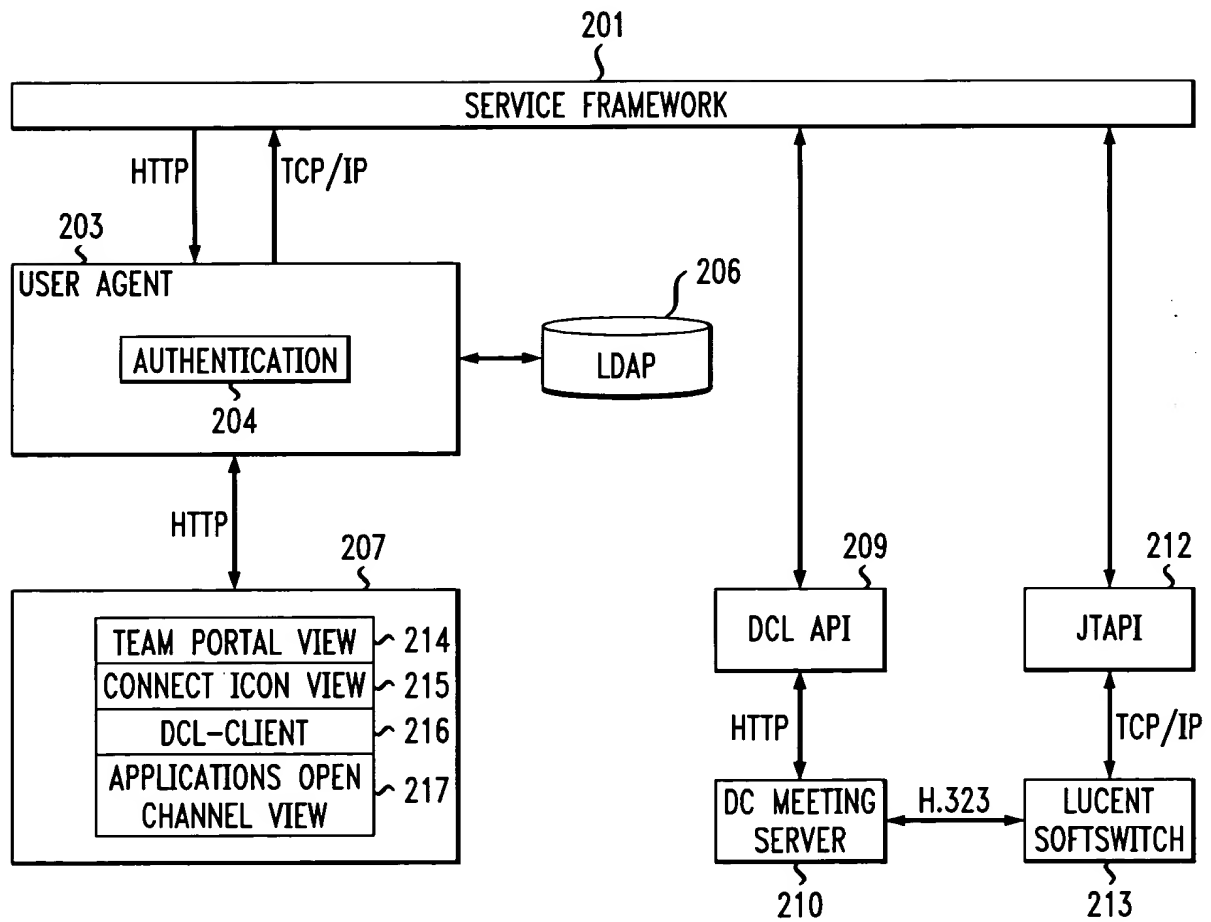
_____ Date: _10/04/01_

FIG. 1

APPLICATION SERVER/MEDIA SERVER ~102

SOFTSWITCH PFS ~103

UNTUNNELLED

SPRING TIDE 5000

MEDIA GATEWAY ~104

ENTERPRISE FIREWALL

106

ROUTER ~107

ENTERPRISE

ACCESS NETWORK

105

POTS CALLS TO/FROM SOFT ENDPOINTS

PSTN 101

SOFT ENDPOINTS WITH MODEMS

RAS

110

CMTS

109

SOFT ENDPOINTS WITH CABLE MODEMS

DSLAM

108

SOFT ENDPOINTS WITH DSL MODEMS

FIG. 2

FIG. 3

PC OR UNIX   NETRA   NT

302
CLIENT: (APPLETS)
306
AUTHENTICATION

TeamPortal VIEW ⌐214
OpenChannel VIEW ⌐217
ConnectIcon VIEW ⌐215

HTTP

304   301
iBET SERVER (APACHE etc.):
SERVLETS:
USER
AGENT ⌐ 203

206
LDAP

305
RMI SERVER:

201⌐ SF

212⌐ JTAPI

TCP/IP

213⌐ LSS:
C++

303
209
DCL API:
JAVA

TCP/IP

210
MEETING
SERVER:

FIG. 4

206

LDAP DATABASE

437

USER   **401**
STATIC DATA
402-1
DEVICE 1
: **402-N**
DEVICE N

403

GROUP   **404**
LIST OF USERS

405

ConnectIcon
406
LIST OF USERS
407
STATIC DATA

408

OpenChannel
409
LIST OF USERS
410
STATIC DATA
411
DESCRIPTION
412
TIME PERIOD
413
ACTIVES LIST
414
SPEAKER LIST

TeamPortal OBJECTS   **423**

DATA TABLES

416
LOADER

417
TIMES VIEW

418
CALENDAR VIEW

419
PEOPLE VIEW

215
ConnectIcon VIEW

217
OpenChannel VIEW

422
MONITOR

424
LOCATIONS

425
HOLIDAYS

426
PLANS

427
GROUPS

428
PEOPLE

429
PRESENCE

430
CONNECTICONS

431
OPEN CHANNELS

432
PERSONAL COMPUTER
433
KEYBOARD/MOUSE MONITOR APPLICATION

434
CALENDAR SERVER
435
USER'S PLANS

213
TELEPHONE SWITCH
436
PHONE ENDPOINT LISTENER

210
CONFERENCE SERVER

201
SERVICE FRAMEWORK

FIG. 5
AUTOMATIC PRESENCE
DATA COLLECTION

501

213

TELEPHONE SWITCH
502

PHONE ENDPOINT
LISTENER

432

PERSONAL COMPUTER
433

KEYBOARD/MOUSE
MONITOR APPLICATION

503

OTHER DEVICE
504

LOGIN/LISTENER
FUNCTION

201

SERVICE
FRAMEWORK

206

PRESENCE DATABASE
437

USER   401

STATIC DATA

402-1

DEVICE 1

402-N

DEVICE N

403

GROUP   404

LIST OF USERS

405

ConnectIcon
406

LIST OF USERS

407

STATIC DATA

408

OpenChannel
409

LIST OF USERS

410

STATIC DATA

411

DESCRIPTION
412

TIME PERIOD

413

ACTIVES LIST

414

SPEAKER LIST

FIG. 6
TeamPortal
DATA ACCESS

601
WEB OR LOCAL DISK
602
LOCATIONS
603
HOLIDAYS

206
PRESENCE DATABASE
437
USER 401
STATIC DATA
402-1
DEVICE 1
⋮ 402-N
DEVICE N

415
TeamPortal OBJECTS

416
LOADER

417
TIMES VIEW

418
CALENDAR VIEW

419
PEOPLE VIEW

215
ConnectIcon VIEW

217
OpenChannel VIEW

422
MONITOR

423
DATA TABLES
424
LOCATIONS
425
HOLIDAYS
426
PLANS
427
GROUPS
428
PEOPLE
429
PRESENCE
430
CONNECTICONS
431
OPEN CHANNELS

403
GROUP 404
LIST OF USERS

405
ConnectIcon 406
LIST OF USERS
407
STATIC DATA

408
OpenChannel
409
LIST OF USERS
410
STATIC DATA
411
DESCRIPTION
412
TIME PERIOD
413
ACTIVES LIST
414
SPEAKER LIST

434
CALENDAR SERVER
435
USER'S PLANS

FIG. 7

TeamPortal DATA USE

415
TeamPortal OBJECTS

416
LOADER

423
DATA TABLES

417
TIMES VIEW

424
LOCATIONS

418
CALENDAR VIEW

425
HOLIDAYS

426
PLANS

427
GROUPS

419
PEOPLE VIEW

428
PEOPLE

429
PRESENCE

422
MONITOR

215
ConnectIcon VIEW

430
ConnectIcon

217
OpenChannel VIEW

431
OpenChannels

FIG. 8
PEOPLE VIEW DETAILS

415
TeamPortal OBJECTS

419
PEOPLE VIEW

J SMITH	smith@aol.com	515 1212	W: C P O: M P H: C	811-1
C ORTIZ	co@ab.com	515 2212	W: C O: M H: C P	811-2
⋮	⋮	⋮	⋮	
P COLE	pc@aol.com	515 9191	W: C P H: C	811-Y

423
DATA TABLES

428
PEOPLE

- 801 NAME
- 802 PHONE
- 803 EMAIL
- 804 UNIQUE_ID

429
PRESENCE

PERSON_ID — 812

813
DEVICE

- 805 NAME
- 806 TYPE
- 807 LOCATION
- 808 IDENTIFIER
- 809 MESSAGE
- 810 TIMESTAMP

FIG. 9

ConnectIcon VIEW DETAILS

415

TeamPortal OBJECTS

908

C ORTIZ:
LOGGED ON AT WORK (3 MINS)
USED TELEPHONE AT WORK (6 MINS)
VIEWED MAILBOX (8 MINS)

215

ConnectIcon VIEW

907

905

NEED TO
FINALIZE DOCUMENT

LUNCH?

906

909

423

DATA TABLES

430

ConnectIcons

901
MESSAGE

902
ALLOWED CONNECTIONS

903
WEB DOCUMENTS

904
LIST OF PEOPLE

429

PRESENCE

PERSON_ID 812

813

DEVICE

805
NAME

806
TYPE

807
LOCATION

808
IDENTIFIER

809
MESSAGE

810
TIMESTAMP

PEOPLE 428

801
NAME

802
PHONE

803
EMAIL

804
UNIQUE_ID

FIG. 10

OpenChannel VIEW DETAILS

415 TeamPortal OBJECTS

217 OpenChannel VIEW

1001-1

1001-2

J SMITH
C ORTIZ
P COLE

1002

1004

YEAR   1m 10m HR DAY WEEK

1003

1005
ONGOING SALES MEETING

1006 OpenChannel ELEMENT

1007 NAME

1008 TIME PERIOD

1009 STATE

423 DATA TABLES

431 OpenChannel

1012

1013 TIME PERIOD

1014 ACTIVES LIST

1015 SPEAKER LIST

DESCRIPTION

1010 TITLE

1011 LIST OF USERS

428 PEOPLE

801 NAME

802 PHONE

803 EMAIL

804 UNIQUE_ID

FIG. 11

306 {

| gwills | xxxxxx | no group ▭ |

Login | Logout | Help

417 {

	Nuremburg (Germany) : 4:58 PM 1/3
	Bangalore (India) : 9:28 PM 1/3
	Swindon (UK) : 3:58 PM 1/3
	Indian Hill (US) : 9:58 PM 1/3

418 {

214 {

1/01

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

2/01

					1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

3/01

				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

4/01

							1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

5/01   **6/01**

419 {

gwills	▦	▦	▦
audris	☐	▦	▦
jhersleb	☐	▦	▦
fwales	▦	▦	▦
datkins	▦	▦	▦
jspillane	▦	▦	▦
anj	▦	▦	▦
beki	▦	▦	☐
mhandel	▦	▦	▦
aespipons	▦	▦	▦

215 {

email | chat | call | send connection

| a | | | | |

◁ | | | ▷

FIG. 12A

ConnectIcon SCENARIO CALL FLOW

TO FIG. 12B

FIG. 12B

FIG. 13A

OpenChannel SCENARIO CALL FLOW

SOFTSWITCH 213

PSTN GATEWAY 1205

DEVICE SERVER 1204

CALL SERVER 1203

MEDIA SERVER 303
CONFERENCE SERVER 210

APPLICATION SERVER 304
USER AGENT 203

SPFS SERVICES FRAMEWORK 201
JTAPI API 212
SERVICE SESSION MANAGER 1202
ACCESS SESSION SERVER 1201

SOFT ENDPOINT 207
PROTOCOL CLIENTS 216
PRESENCE CLIENTS

214
215

AL SELECTS MEMBERS OF WRITING TEAM (KATHY, PAT AND ANN) AND SELECTS OpenChannel

AL INITATES AN OpenChannel INCLUDING KATHY, PAT AND ANN

LONG RUNNING CONFERENCE CALL AND SHARED APPLICATION SESSION REQUEST BETWEEN AL, KATHY, PAT AND ANN

CALL LOGIC ALGORITHMS ARE APPLIED

CONFERENCE BRIDGE RESERVATION REQUEST AND SHARED APPLICATION SESSION REQUEST

CONFERENCE BRIDGE RESERVATION AND SHARED APPLICATION SESSION ACK

CALL REQUEST FOR AL

CALL INVITE TO AL

AL ACKNOWLEDGES INVITE

TO FIG. 13B

FIG. 13B

FROM FIG. 13A

NOTIFICATION OF BRIDGE CONNECTION FOR AL

CALL REQUEST FOR KATHY, PAT AND ANN

CALL INVITE TO KATHY, PAT AND ANN

KATHY, PAT AND ANN ACKNOWLEDGES INVITES

NOTIFICATION OF BRIDGE CONNECTION FOR KATHY, PAT AND ANN

DC RECORDER IS INVOKED

ACKNOWLEDGEMENT

AL REQUESTS SESSION TO BE RECORDED

ACKNOWLEDGEMENT

KATHY CHANGES HER PARTICIPATION FROM ACTIVE TO MONITOR (SOCKET)

STATE CHANGE FORWARDED TO PRESENCE SERVER

CONFERENCE SERVER IS NOTIFIED TO PLACE KATHY IN LISTEN-ONLY MODE

CONFERENCE SEVER TEMPORARILY DISCONNECTS KATHY FROM VOICE CONFERENCE

ACKNOWLEDGEMENT

PRESENCE SERVER UPDATES TEAM DIRECTORY

NOTIFY AL, PAT, ANN AND KATHY OF KATHY'S CHANGE IN PARTICIPATION FROM ACTIVE TO MONITOR